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AIR FORCE

OCCUPATIONAL SURVEY REPORT

AIRBORNE MISSION SYSTEMS

AFSC 1A5X1

OSSN: 2377

SEPTEMBER 1999

OCCUPATIONAL ANALYSIS PROGRAM
AIR FORCE OCCUPATIONAL MEASUREMENT SQUADRON
AIR EDUCATION and TRAINING COMMAND
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PREFACE

This report presents the results of an Air Force Occupational Survey of the Airborne Mission Systems career ladder, Air Force Specialty Code (AFSC) 1A5X1. Authority for conducting occupational surveys is contained in AFI 36-2623. Computer products used in this report are available for use by operations and training officials.

Lieutenant Joe McAmis developed the survey instrument. Ms. Karen B. Tilghman provided computer-programming support and Ms. Dolores Navarro provided administrative support. Lieutenant Christopher Buchanan analyzed the data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Roger W. Barnes, Chief, Airman Analysis Section, Occupational Analysis Flight, Air Force Occupational Measurement Squadron (AFOMS).

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel. Additional copies are available upon request to AFOMS/OMYXI, 1550 5th Street East, Randolph Air Force Base, Texas 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our web site at http://www.omsq.af.mil.

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SUMMARY OF RESULTS

1. **Survey Coverage**: The Airborne Mission Systems career ladder was surveyed to provide current job and task data for use in updating career ladder documents and training programs. Survey results are based on responses from 207 members accounting for 58 percent of the total population surveyed.

2. **Specialty Jobs**: Two jobs were identified in the career ladder structure analysis. The Airborne Mission Technician Job is totally oriented toward technical task performance and accounts for 93 percent of the population. The remaining job focuses on management and training.

3. **Career Ladder Progression**: A somewhat typical pattern of progression is noted within the AFSC 1A5X1 career ladder. Personnel at the 3- and 5-skill levels work in the technical jobs of the career ladder and spend most of their time on technical tasks. As incumbents move up to the 7-skill level they begin to perform supervisory tasks, but still spend much of their time performing the technical tasks of the career ladder.

4. **Training Analysis**: The current STS warrants review of proficiency coding based on survey data. Many tasks were too general to support the detailed task titles in the STS.

5. **Job Satisfaction**: Job satisfaction among AFSC 1A5X1 personnel is lower for first-enlistment as far as job interest and utilization of training but slightly higher for sense of accomplishment. Reenlistment intentions are lower than the comparative sample for second-enlistment and career personnel. All TAFMS groups rate perceived utilization of training higher than the comparative sample.

6. **Implications**: Survey results indicate the present classification structure accurately portrays the jobs performed in this career ladder. The career ladder progression is typical of most AFSCs. Training documents warrant review for proficiency coding. Job satisfaction ratings are similar to other AFSCs while reenlistment intentions are overall lower than the comparative sample. First-enlistment and career personnel groups rated perceived utilization of training lower than the previous sample, reinforcing the recommendation for an STS review.

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OCCUPATIONAL SURVEY REPORT (OSR)
AIRBORNE MISSION SYSTEMS
(AFSC 1A5X1)

INTRODUCTION

This is a report of an occupational survey of the Airborne Mission Systems career ladder conducted by the Air Force Occupational Measurement Squadron (AFOMS). The current Airborne Mission Systems career ladder was created in October 1995. Survey data will be used to identify current utilization patterns among career ladder personnel and evaluate career ladder documents and training programs.

Background

As described in the AFMAN 36-2108, *Airman Classification,* 30 April 1999, *Specialty Description,* dated 31 October 1995, Airborne Mission Systems personnel are responsible for operating, monitoring, inspecting, testing, maintaining, optimizing and evaluating radar, computer display, identifying friend or foe, and ancillary systems equipment.

Personnel entering the AFSC 1A5X1 career ladder must attend the Airborne Mission Systems Apprentice Course, E3ABR1A521, which is conducted at Keesler AFB, Miss. The course is 28 weeks, 2 days and 24 credit hours towards CCAF are awarded upon completion of the course.

Entry into this career ladder currently requires an Armed Forces Vocational Aptitude Test Battery (ASVAB) score of Electrical - 67; a strength factor of "G" (Weight lift of 40 lbs.) is also required.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) Occupational Survey Study Number (OSSN) 2377, dated December 1998. A tentative task list was prepared after reviewing pertinent career ladder publications and directives, pertinent tasks from the previous survey instrument, and data from the last OSR. The preliminary task list was refined and validated through personal interviews with 10 subject-matter experts (SMEs) at the following training location and operational installations:

BASE	UNIT VISITED
Keesler AFB MS	336 TRS
Tinker AFB OK	552 ACW
Robins AFB GA	93 ACW

The resulting JI contains a comprehensive listing of 290 tasks grouped under 11 duty headings, and a background section requesting such information as grade, base, MAJCOM assigned, organizational level, component status, job title, functional area, work schedule, test equipment used or operated, support equipment used or operated, aircraft maintained, and forms used.

Survey Administration

From January 1999 through May 1999, base-training offices at operational units worldwide administered the inventory to eligible AFSC 1A5X1 personnel. Job incumbents were selected from a computer-generated mailing list obtained from personnel data tapes maintained by the Air Force Personnel Center, Randolph AFB TX. Each individual who completed the inventory first completed an identification and biographical information section and then checked each task performed in his or her current job. After checking all tasks performed, each member then rated each of these tasks on a 9-point scale, showing relative time spent on that task, as compared to all other tasks checked. The ratings ranged from 1 (very small amount time spent) through 5 (about average time spent) to 9 (very large amount time spent). To determine relative time spent for each task checked by a respondent, all of the incumbent's ratings are assumed to account for 100 percent of his or her time spent on the job and are summed. Each task rating is then divided by the total task ratings and multiplied by 100 to provide a relative percentage of time for each task. This procedure provides a basis for comparing tasks in terms of both percent members performing and averages percent time spent.

Survey Sample

Personnel were selected to participate in this survey so as to ensure an accurate representation across major commands (MAJCOM) and military paygrade groups. All eligible AFSC 1A5X1 personnel were mailed survey disks. Table 1 reflects the percentage distribution, by MAJCOM, of assigned AFSC 1A5X1 personnel as of January 1999. The 207 respondents in the final sample represent 54 percent of the total assigned personnel and 58 percent of the total personnel surveyed. Table 2 reflects the paygrade distribution for these AFSC 1A5X1 personnel.

TABLE 1

COMMAND DISTRIBUTION OF AFSC 1A5X1 PERSONNEL

COMMAND	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
ACC	79	83
AETC	3	4
EUR	8	8
PACAF	10	5

TOTAL ASSIGNED* = 385
TOTAL SURVEYED** = 357
TOTAL IN SURVEY SAMPLE = 207
PERCENT OF ASSIGNED IN SAMPLE = 54%
PERCENT OF SURVEYED IN SAMPLE = 58%

* Assigned strength as of January 1999

** Excludes personnel in PCS, student, or hospital status, or less than 6 weeks on the job

TABLE 2

PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

GRADE	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
E-2 - E-3	17	15
E-4	39	37
E-5	24	24
E-6	11	14
E-7	7	7
E-8	2	2

* Assigned strength as of January 1999

Both Command and Paygrade distribution of the survey sample are close to the percent assigned. This indicates the sample is a true representation of the career ladder population.

Task Factor Administration

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected senior AFSC 1A5X1 personnel (generally E-6 or E-7 craftsmen) also completed a second booklet for either training emphasis (TE) or task difficulty (TD). These booklets were processed separately from the JIs. This information is used in a number of different analyses discussed in more detail within the report.

Training Emphasis (TE): TE is a rating of the amount of emphasis that should be placed on tasks in entry-level training. The 38 senior NCOs who completed a TE booklet were asked to select tasks they felt require some sort of structured training for entry-level personnel and then indicate how much training emphasis these tasks should receive, from 1 (extremely low emphasis) to 9 (extremely high emphasis). Structured training is defined as training provided at resident training schools, field-training detachments (FTD), mobile training teams (MTT), formal on-the-job-training (OJT), or any other organized training method. Interrater agreement for these 38 raters was acceptable. The average TE rating was 2.70, with a standard deviation of 1.73. Any task with a TE rating of 4.43 or above is considered to have high TE.

Task Difficulty (TD): TD is an estimate of the amount of time needed to learn how to do each task satisfactorily. The 45 senior NCOs who completed TD booklets were asked to rate the

difficulty of each task using a 9-point scale (extremely low to extremely high). Interrater reliability was acceptable. Ratings were standardized so tasks have an average difficulty of 5.00 and a standard deviation of 1.00. Any task with a TD rating of 6.00 or above is considered to be difficult to learn.

When used in conjunction with the primary criterion of percent members performing, TE and TD ratings can provide insight into first-enlistment personnel training requirements. Such insights may suggest a need for lengthening or shortening portions of instruction supporting entry-level jobs.

SPECIALTY JOBS

The first step in the analysis process is to identify the structure of the career ladder in terms of the jobs performed by the respondents. The Comprehensive Occupational Data Analysis Program (CODAP) assists by creating an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group, or forms new groups based on the similarity of tasks and time spent ratings.

The basic group used in the hierarchical clustering process is the ***Job***. When two or more jobs have a substantial degree of similarity, in tasks performed and time spent on tasks, they are grouped together and identified as a ***Cluster***. The structure of the career ladder is then defined in terms of jobs and clusters of jobs.

Overview of Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, two independent jobs were identified within the career ladder. Figure 1 illustrates the jobs performed by AFSC 1A5X1 personnel.

A listing of these jobs is provided below. The stage (ST) number shown beside each title references computer printed information, the letter "N" indicates the number of personnel in each group.

I. AIRBORNE MISSION TECHNICIAN JOB (ST10, N=192)

II. AIRBORNE MISSION INSTRUCTOR JOB (ST07, N=10)

AFSC 1A5X1 CAREER LADDER SPECIALTY JOBS
(N = 207)

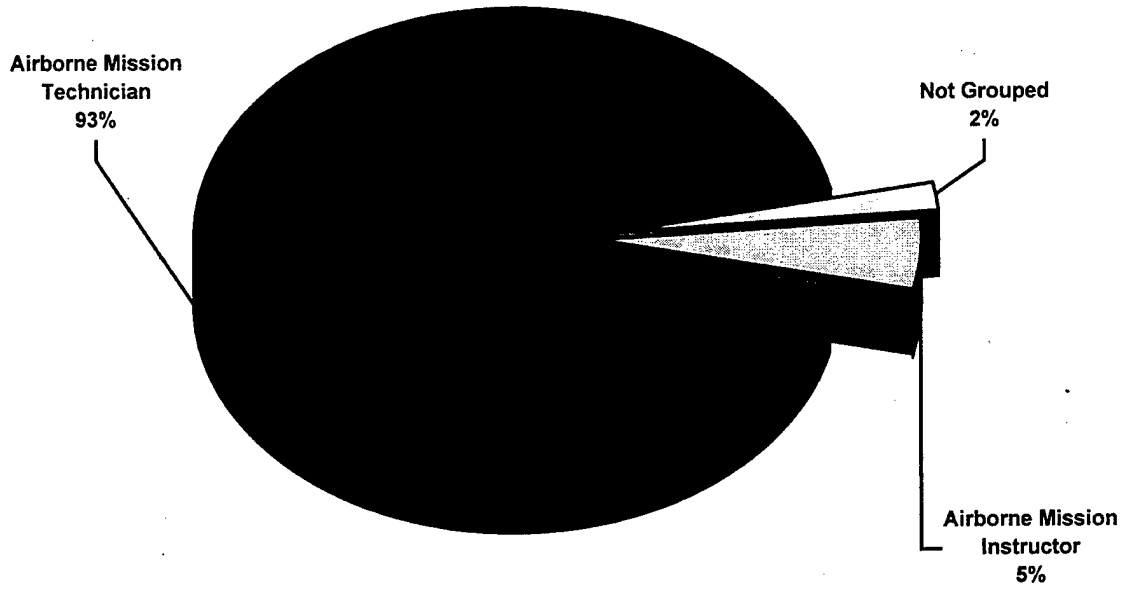

FIGURE 1

Group Descriptions

The following paragraphs contain brief descriptions of the jobs identified through the career ladder structure analysis. Table 3 presents the relative time spent on duties by members of these specialty jobs. Selected background data for these jobs are provided in Table 4. Representative tasks for all the groups are contained in Appendix A.

I. AIRBORNE MISSION TECHNICIAN JOB (ST010). The 192 airmen forming this job (93 percent of the survey sample) (Table 3). The average number of tasks performed by this group is 126, indicating their diversity in performing the core Airborne Mission Systems duties. They spend 21 percent of their time performing the General In-Flight tasks of Duty A and an additional 33 percent of their time is spent on Maintaining Mission Systems and Common Aircrew activities of Duties E and G. Typical of the Airborne Mission Technician tasks performed include:

- Perform/practice aircrew emergency procedures
- Debrief ground maintenance personnel
- Participate in mission briefings
- Review FCIF's
- Perform permission requirements
- Review, annotate, initiate flight records
- Post changes to aircrew publications
- Perform inspections of life support equipment
- Perform circuit breaker inspections
- Analyze equipment for mission configurations

Thirty percent report holding the 3-skill level and 43 percent hold the 5-skill level. These members average 8 ½ years in the service and over 7 years in the career field. Furthermore, 86 percent of these members are assigned to ACC.

II. AIRBORNE MISSION INSTRUCTOR JOB (ST07). The 10 airmen performing within this cluster (5 percent of the survey sample) perform an average of 83 tasks and are distinguished by the 64 percent of their time spent performing the Management/Supervisory and Training tasks of Duty H and I (Table 3). Distinctive tasks performed include:

- Inspect personnel for compliance with standards
- Interpret policies, directives and procedures
- Counsel subordinates
- Evaluate effectiveness of training programs
- Develop training programs, plans and procedures
- Brief personnel concerning training programs
- Develop written tests
- Develop/procure training materials
- Develop/establish work methods/procedures
- Evaluate progress of trainees

Sixty percent of these airmen hold the 5-skill level and 30 percent the 7-skill level. These members average 13 ½ years in the career field and over 14 years in the service. The predominant paygrades of this job are E-6. Forty percent of these members reported calling themselves Technical Training Instructors.

TABLE 3

RELATIVE PERCENT TIME SPENT ON DUTIES BY SPECIALTY JOBS

DUTIES		Airborne Mission Instructor Job (ST07) (N=10)	Airborne Mission Technician Job (ST10) (N=192)
A	PERFORMING GENERAL IN-FLIGHT ACTIVITIES	7	21
B	MONITORING OR OPERATING ELECTRONIC COMPUTER SYSTEMS	1	4
C	PERFORMING PREMISSION AND POSTMISSION ACTIVITIES	1	6
D	PERFORMING PREFLIGHT INSPECTIONS OR PROCEDURES	2	11
E	MAINTAINING MISSIONS SYSTEMS	5	17
F	PERFORMING MOBILITY ACTIVITIES	2	8
G	PERFORMING COMMON AIRCREW ACTIVITIES	3	16
H	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	33	7
I	PERFORMING TRAINING ACTIVITIES	31	5
J	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER	11	4
K	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4	1

TABLE 4

SELECTED BACKGROUND DATA FOR SPECIALTY JOBS

	Airborne Mission Instructor Job (ST07)	Airborne Mission Technician Job (ST10)
NUMBER IN GROUP	10	192
PERCENT OF SAMPLE	5%	93%
PERCENT IN CONUS	90	83
DAFSC DISTRIBUTION:		
1A531	0	30
1A551	60	43
1A571	30	25
1A591	10	2
PREDOMINANT GRADE(S)	E-6	E-4 - E-5
AVERAGE MONTHS IN CAREER FIELD	163	94
AVERAGE MONTHS IN SERVICE	178	103
PERCENT IN FIRST ENLISTMENT (1-48 MOS TAFMS)	0	34%
PERCENT SUPERVISING	70%	36%
AVERAGE NUMBER OF TASKS PERFORMED	83	126

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups, in conjunction with the analysis of the career ladder structure, is an important part of each occupational survey. The DAFSC analysis identifies differences in tasks performed at the various skill levels. This information may then be used to evaluate how well career ladder documents, such as the AFMAN 36-2108 *Airman Classification,* Specialty Description and the Career Field Education and Training Plan (CFETP), reflect what career ladder personnel are actually doing in the field.

The distribution of skill-level groups across the career ladder jobs and clusters is displayed in Table 5, while Table 6 offers another perspective by displaying the relative percent time spent on each duty across skill-level groups. A somewhat typical pattern of progression is noted within the AFSC 1A5X1 career ladder. Personnel at the 3- and 5-skill levels work in the technical jobs of the career ladder and spend most of their time on technical tasks. As incumbents move up to the 7-skill level they begin to perform supervisory tasks, but still spend some of their time performing the technical tasks of the career ladder.

Skill-Level Descriptions

DAFSC 1A531. Representing 28 percent of the survey sample, these 59 airmen perform an average of 99 tasks. Ninety-seven percent of this group work in the Airborne Mission Systems Job (Table 5).

Table 6 reflects the percent time spent on duties by DAFSC 1A531 personnel. At the 3-skill level, their time is well distributed among the technical tasks of the career ladder. Representative tasks performed by these members are listed in Table 7.

DAFSC 1A551. The 91 members of this group account for 44 percent of the survey sample. Ninety-one percent work in the Airborne Mission Systems Job and 7 percent work in the Airborne Mission Instructor Job (Table 5).

Table 6 provides a comparison of the relative time spent on duties at the 5-skill level. This table reflects a pattern similar to the 3-skill level, with fairly even distribution of members performing the technical tasks of the career ladder. As shown in this table, 5-skill level personnel begin to perform the training tasks of Duty I.

Tables 8 lists representative tasks performed by these DAFSC 1A551 personnel. Table 9 reflects those tasks which best differentiate the 3-skill levels from the 5-skill levels. The most noticeable difference between the two is the supervisory/training tasks performed by members of the 5-skill level.

DAFSC 1A571. These 51 members perform an average of 151 tasks and represent 25 percent of the survey sample. Table 5 shows the highest percentages of members are in the Airborne Mission Technician Job, while 6 percent represent the Instructor Job.

Table 6 reflects the percent time spent on duties by DAFSC 1A571 members. The main point of this table is the decrease in the amount of time spent by members performing the technical tasks of Duties A-G, compared to the 3- and 5-skill level members, while increasing the time spent performing management and supervisory tasks.

Representative tasks performed by 7-skill level members are reflected in Table 10. Table 11 reflects tasks which best differentiate between 5- and 7-skill levels. This table clearly shows the much higher devotion to management and supervisory tasks at the 7-skill level than the 5-skill level.

DAFSC 1A591. These 6 members perform an average of 138 tasks and represent 3 percent of the survey sample. These senior members represent the majority of Airborne Mission Instructors (17 percent) along with 67 percent working in the Airborne Mission Systems Job. Representative tasks performed by 9-skill level members are reflected in Table 12 while Table 13 shows the tasks which differentiate 7- and 9- skill levels.

Summary

Progression in the Airborne Mission Systems career ladder follows a regular pattern of highly technical job focus at the lower skill levels, with a broadening into supervision and management at the 9-skill level. An emphasis is clearly seen performing primarily the core job of the career ladder at the 3- and 5-skill levels, with broadening into supervisory functions at the 7-skill level.

TABLE 5

DISTRIBUTION OF DAFSC GROUP MEMBERS ACROSS SPECIALTY JOBS
(PERCENT RESPONDING)

	SPECIALTY JOBS	1A531 (N=59)	1A551 (N=91)	1A571 (N=51)	1A591 (N=6)
I.	AIRBORNE MISSION TECHNICIAN	97	91	94	67
II.	AIRBORNE MISSION INSTRUCTOR JOB	0	7	6	17
	NOT GROUPED	3	2	0	26

TABLE 6

RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES		1A531 (N=59)	1A551 (N=91)	1A571 (N=51)	1A591 (N=6)
A	PERFORMING GENERAL IN-FLIGHT ACTIVITIES	24	20	20	12
B	MONITORING OR OPERATING ELECTRONIC COMPUTER SYSTEMS	5	4	3	3
C	PERFORMING PREMISSION AND POSTMISSION ACTIVITIES	7	6	5	3
D	PERFORMING PREFLIGHT INSPECTIONS OR PROCEDURES	12	10	9	6
E	MAINTAINING MISSIONS SYSTEMS	20	16	14	8
F	PERFORMING MOBILITY ACTIVITIES	9	7	6	4
G	PERFORMING COMMON AIRCREW ACTIVITIES	17	15	13	9
H	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	2	8	15	29
I	PERFORMING TRAINING ACTIVITIES	1	9	9	12
J	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER	2	4	5	13
K	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1	1	2	1

TABLE 7

REPRESENTATIVE TASKS PERFORMED BY 1A531 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=59)
C0058	Participate in general or specialized mission briefings	98
C0060	Review, annotate, or initiate aircraft flight or maintenance record forms, such as Air Force Technical Order (AFTO) Forms 781-series	97
A0037	Perform or practice aircrew emergency procedures	95
C0059	Perform pre-mission requirements, such as reviewing flight crew information files (FCIFs) or annotating flight orders	95
C0055	Debrief ground maintenance personnel	95
G0186	Review FCIFs	95
G0178	Operate fire extinguishers	95
G0187	Review mission operations read files (MORFs)	93
D0063	Perform preflight inspections of circuit breaker panels	92
D0080	Perform visual inspections of cables or connector air ducts	92
D0073	Perform preflight inspections of life support equipment or seats	92
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	92
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	90
E0084	Coordinate missions systems equipment malfunctions with MCCs	90
F0143	Perform aircraft cocking or uncocking procedures	90
A0002	Analyze equipment for best mission configurations	88
A0001	Advise maintenance personnel in identifying aircraft systems malfunctions	88
G0185	Post changes to personal aircrew publications	88
A0038	Remove or replace minor electrical hardware, such as lamps or switches	88
E0115	Perform diagnostics on mission equipment	86
D0081	Secure personal equipment on aircraft during preflight	86
C0056	Debrief operations personnel on software or equipment malfunctions	86
G0189	Secure equipment for descents or landings	86
A0014	Load or unload programs using hard disk subsystems (HDSs)	86
A0009	Interpret on-line status indicators for fault isolations	85
A0012	Interpret visual fault indicators for fault isolations	85
C0054	Conduct mission planning sessions	85
D0077	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	85
G0179	Operate galley equipment, such as ovens or coffee makers	85
G0167	File in-flight logs in aircraft history books	85
G0188	Review or annotate flight orders	85
E0101	Interpret block diagrams for fault isolations	83
E0100	Inspect card slots	81
A0027	Monitor or operate cooling systems	80
E0099	Identify test equipment malfunctions	80
A0034	Perform HDS or RTMM loading procedures	80
A0005	Decode octal, binary, or hexadecimal readouts	78
E0087	Fault isolate cooling systems	78

* Average Number of Tasks Performed - 99

TABLE 8

REPRESENTATIVE TASKS PERFORMED BY 1A551 PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=91)
A0037	Perform or practice aircrew emergency procedures	92
C0055	Debrief ground maintenance personnel	91
C0060	Review, annotate, or initiate aircraft flight or maintenance record forms, such as Air Force Technical Order (AFTO) Forms 781-series	91
A0002	Analyze equipment for best mission configurations	90
C0059	Perform pre-mission requirements, such as reviewing flight crew information files (FCIFs) or annotating flight orders	90
C0058	Participate in general or specialized mission briefings	89
D0063	Perform preflight inspections of circuit breaker panels	89
G0186	Review FCIFs	89
G0188	Review or annotate flight orders	89
G0179	Operate galley equipment, such as ovens or coffee makers	88
D0080	Perform visual inspections of cables or connector air ducts	88
D0073	Perform preflight inspections of life support equipment or seats	88
G0185	Post changes to personal aircrew publications	88
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	88
D0081	Secure personal equipment on aircraft during preflight	87
E0084	Coordinate missions systems equipment malfunctions with MCCs	87
G0187	Review mission operations read files (MORFs)	87
E0087	Fault isolate cooling systems	87
A0038	Remove or replace minor electrical hardware, such as lamps or switches	87
G0170	Maintain current status of flight manuals, safety and operational supplements, or flight crew checklists	86
G0189	Secure equipment for descents or landings	86
E0115	Perform diagnostics on mission equipment	85
D007?	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	85
F014	Perform aircraft cocking or uncocking procedures	85
D007	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	84
A000	Advise maintenance personnel in identifying aircraft systems malfunctions	84
E010	Interpret block diagrams for fault isolations	84
A0012	Interpret visual fault indicators for fault isolations	82
C0056	Debrief operations personnel on software or equipment malfunctions	82
G0180	Participate in life support training seminars	82
A0027	Monitor or operate cooling systems	81
G0167	File in-flight logs in aircraft history books	81
A0004	Coordinate systems status with mission crews	81
A0005	Decode octal, binary, or hexadecimal readouts	81
C0054	Conduct mission planning sessions	80
A0009	Interpret on-line status indicators for fault isolations	79
G0171	Notify flight engineers (FEs) of visual warning display unit malfunctions	78

* Average Number of Tasks Performed - 119

TABLE 9

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSCs 1A531AND 1A551 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		1A531 (N=59)	1A551 (N=91)	DIFF
I0245	Counsel trainees on training progress	2	54	-52
I0253	Evaluate progress of trainees	2	53	-51
H0202	Counsel subordinates concerning personal matters	0	49	-49
I0246	Determine training requirements	5	54	-49
I0257	Personalize lesson plans	3	51	-47
I0250	Develop or procure training materials or aids	2	47	-46
H0220	Evaluate personnel for compliance with performance standards	3	47	-44
I0248	Develop training programs, plans, or procedures	2	46	-44
H0226	Interpret policies, directives, or procedures for subordinates	3	45	-42
I0244	Conduct on-the-job training (OJT)	15	56	-41
H0201	Conduct supervisory performance feedback sessions	2	40	-38
I0241	Brief personnel concerning training programs or matters	2	40	-38
I0252	Evaluate effectiveness of training programs, plans, or procedures	0	38	-38
H0215	Establish performance standards for subordinates	2	38	-37
I0247	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	0	37	-37
G0168	Instruct extra crew members or passengers on in-flight or ground emergency procedures	15	52	-36
H0223	Initiate actions required due to substandard performance of personnel	5	40	-34
H0225	Inspect personnel for compliance with military standards	14	47	-34
I0254	Evaluate training methods or techniques of instructors	0	34	-34
H0239	Write or indorse military performance reports	0	33	-33
I0240	Administer or score tests	0	33	-33
H0204	Determine or establish work assignments or priorities	10	42	-32
H0209	Develop or establish work methods or procedures	7	38	-32
I0249	Develop written tests	0	32	-32
I0251	Establish or maintain study reference files	2	34	-32
I0255	Inspect training materials or aids for operation or suitability	2	34	-32
H0235	Write recommendations for awards or decorations	2	33	-31
H0221	Evaluate personnel for promotion, demotion, reclassification, or special awards	0	29	-29

TABLE 10

REPRESENTATIVE TASKS PERFORMED BY 1A571PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=51)
A0037	Perform or practice aircrew emergency procedures	98
E0084	Coordinate missions systems equipment malfunctions with MCCs	98
G0189	Secure equipment for descents or landings	98
A0027	Monitor or operate cooling systems	96
A0002	Analyze equipment for best mission configurations	96
G0170	Maintain current status of flight manuals, safety and operational supplements, or flight crew checklists	96
D0063	Perform preflight inspections of circuit breaker panels	96
C0055	Debrief ground maintenance personnel	96
G0186	Review FCIFs	96
C0056	Debrief operations personnel on software or equipment malfunctions	96
G0185	Post changes to personal aircrew publications	96
A0001	Advise maintenance personnel in identifying aircraft systems malfunctions	96
A0031	Perform aircrew in-flight training and certification requirements	94
E0115	Perform diagnostics on mission equipment	94
C0058	Participate in general or specialized mission briefings	94
D0080	Perform visual inspections of cables or connector air ducts	94
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	94
D0073	Perform preflight inspections of life support equipment or seats	94
C0059	Perform pre-mission requirements, such as reviewing flight crew information files (FCIFs) or annotating flight orders	94
A0004	Coordinate systems status with mission crews	94
C0060	Review, annotate, or initiate aircraft flight or maintenance record forms, such as Air Force Technical Order (AFTO) Forms 781-series	94
G0188	Review or annotate flight orders	94
E0087	Fault isolate cooling systems	94
G0171	Notify flight engineers (FEs) of visual warning display unit malfunctions	94
D0077	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	92
D0081	Secure personal equipment on aircraft during preflight	92
A0023	Monitor and operate oxygen systems	92
A0038	Remove or replace minor electrical hardware, such as lamps or switches	92
A0021	Monitor and operate life support equipment	90
A0030	Perform air refueling procedures	90
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	90
G0167	File in-flight logs in aircraft history books	88
G0187	Review mission operations read files (MORFs)	88
E0101	Interpret block diagrams for fault isolations	88
G0180	Participate in life support training seminars	88
F0143	Perform aircraft cocking or uncocking procedures	88
A0020	Monitor and operate audio distribution systems (ADSs) or crew member terminals (CMTs)	86

* Average Number of Tasks Performed - 151

TABLE 11

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSCs 1A551AND 1A571PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		1A551 (N=91)	1A571 (N=51)	DIFF
A0020	Monitor and operate audio distribution systems (ADSs)	44	86	-42
H0235	Write recommendations for awards or decorations	33	73	-40
I0254	Evaluate training methods or techniques of instructors	34	73	-38
H0200	Conduct supervisory orientations for newly assigned personnel	25	63	-37
H0208	Develop self-inspection or self-assessment program checklists	21	57	-36
H0197	Conduct safety inspections of equipment or facilities	16	51	-35
G0181	Perform crew information file checks	37	73	-35
H0224	Initiate personnel action requests	10	45	-35
H0234	Write job or position descriptions	18	53	-35
H0239	Write or indorse military performance reports	33	67	-34
J0267	Initiate requests for TDY orders	19	53	-34
H0194	Assign personnel to work areas or duty positions	16	49	-33
H0214	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures (SOPs)	16	49	-33
H0220	Evaluate personnel for compliance with performance standards	47	80	-33
K0281	Develop equipment checklists	10	43	-33
H0226	Interpret policies, directives, or procedures for subordinates	45	78	-33
H0210	Develop or establish work schedules	35	67	-32
H0196	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	36	69	-32
H0230	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	24	55	-31
H0222	Implement safety or security programs	24	55	-31
I0249	Develop written tests	32	63	-31
I0253	Evaluate progress of trainees	53	82	-30
H0221	Evaluate personnel for promotion, demotion, reclassification, or special awards	29	59	-30
H0202	Counsel subordinates concerning personal matters	49	78	-29
H0198	Conduct self-inspections or self-assessments	40	69	-29
I0241	Brief personnel concerning training programs or matters	40	69	-29

TABLE 12

REPRESENTATIVE TASKS PERFORMED BY 1A591PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=6)
H0230	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	100
H0196	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	100
H0235	Write recommendations for awards or decorations	100
J0274	Maintain or update status indicators, such as boards, graphs, or charts	100
J0278	Review TO changes	100
I0252	Evaluate effectiveness of training programs, plans, or procedures	83
I0241	Brief personnel concerning training programs or matters	83
H0234	Write job or position descriptions	83
H0229	Review budget requirements	83
H0221	Evaluate personnel for promotion, demotion, reclassification, or special awards	83
J0277	Review TOs for in-flight procedures	83
H0239	Write or indorse military performance reports	83
I0246	Determine training requirements	83
H0215	Establish performance standards for subordinates	83
H0202	Counsel subordinates concerning personal matters	83
H0213	Draft supplements or changes to directives, such as policy directives, instructions, or manuals	83
H0211	Draft budget requirements	83
J0270	Maintain administrative files	83
H0198	Conduct self-inspections or self-assessments	83
H0201	Conduct supervisory performance feedback sessions	83
H0226	Interpret policies, directives, or procedures for subordinates	83
H0200	Conduct supervisory orientations for newly assigned personnel	83
A0020	Monitor and operate audio distribution systems (ADSs) or crew member terminals (CMTs)	83
G0179	Operate galley equipment, such as ovens or coffee makers	83
G0170	Maintain current status of flight manuals, safety and operational supplements, or flight crew checklists	83
A0009	Interpret on-line status indicators for fault isolations	83
A0031	Perform aircrew in-flight training and certification requirements	83
A0012	Interpret visual fault indicators for fault isolations	83
A0027	Monitor or operate cooling systems	83
A0035	Perform operational checkouts of aircraft after modifications or maintenance	83
A0037	Perform or practice aircrew emergency procedures	83
G0165	Coordinate corrections of aircraft discrepancies or malfunctions with aircraft commanders	83
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	83
D0062	Perform preflight inspections of ancillary systems	83
C0054	Conduct mission planning sessions	83

* Average Number of Tasks Performed - 138

TABLE 13

TASKS WHICH BEST DIFFERENTIATE BETWEEN
DAFSCs 1A571AND 1A591PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS		1A571 (N=51)	1A591 (N=6)	DIFF
F0138	Maintain immunization records	86.27	33.33	52.94
I0249	Develop written tests	62.75	16.67	46.08
G0168	Instruct extra crew members or passengers on in-flight or ground emergency procedures	62.75	16.67	46.08
E0115	Perform diagnostics on mission equipment	94.12	50.00	44.12
A0019	Locate units, connectors, components, modules, columns, rows, pins, or test points using alphanumeric designators	74.51	33.33	41.18
E0102	Interpret program printouts for fault isolations	72.55	33.33	39.22
I0240	Administer or score tests	50.98	16.67	34.31
I0253	Evaluate progress of trainees	82.35	50.00	32.35
H0205	Develop inputs to mobility, contingency, disaster preparedness, or unit emergency or alert plans	31.37	.00	31.37
E0122	Remove or replace inverters	47.06	16.67	30.39
G0166	Demonstrate use of life preservers or oxygen masks to passengers	47.06	16.67	30.39
A0001	Advise maintenance personnel in identifying aircraft systems malfunctions	96.08	66.67	29.41
I0242	Complete student entry or withdrawal forms	29.41	.00	29.41
H0211	Draft budget requirements	11.76	83.33	-71.57
H0229	Review budget requirements	13.73	83.33	-69.61
J0274	Maintain or update status indicators, such as boards, graphs, or charts	43.14	100.00	-56.86
H0228	Plan layouts of facilities	17.65	66.67	-49.02
H0213	Draft supplements or changes to directives, such as policy directives, instructions, or manuals	37.25	83.33	-46.08
H0230	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	54.90	100.00	-45.10
G0191	Select mission area maps	45.10	83.33	-38.24
J0270	Maintain administrative files	50.98	83.33	-32.35
H0237	Write staff studies, surveys, or routine reports, other than training or inspection reports	35.29	66.67	-31.37
H0196	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	68.63	100.00	-31.37

TRAINING ANALYSIS

Occupational survey data are one of many sources of information which can be used to assist in the development of a training program relevant to the needs of personnel in their first enlistment. Factors which may be used in evaluating training include the overall description of the work being performed by first-job or first-enlistment personnel and their overall distribution across career ladder jobs, percentages of first-job (1-24 months TAFMS) or first-enlistment (1-48 months TAFMS) members performing specific tasks, as well as TE and TD ratings (previously explained in the **SURVEY METHODOLOGY** section).

First-Enlistment Personnel

This study has 13 members in their first-job assignment (1-24 months TAFMS), representing 6 percent of the survey sample. Table 14 displays the relative time spent on duties by first-job personnel. As seen in this table, first-job personnel spend 43 percent of their time performing General In-Flight/Mission System's tasks of duties A and E, with smaller percentages of time spread across specific areas of the job inventory. Table 15 lists representative tasks performed by these first-job personnel and reflects the technical job of these newly assigned personnel.

There are 65 members in their first-enlistment, representing a high 31 percent of the total survey sample. Figure 2 reflects the distribution of first-enlistment personnel within the career ladder. Table 16 displays the relative percent of time spent on duties by first-enlistment personnel. Reviewing the table, first-enlistment personnel spend 43 percent of their time performing the General In-Flight/Mission Systems tasks of Duties A and E. First-enlistment personnel are primarily employed in the Airborne Mission System Job, with representative tasks performed displayed in Table 17.

Table 18 reflects the Test Equipment used by first-enlistment respondents. Fast Fourier Transform (FFT) Test Sets and Spectrum Analyzers were used by over 50 percent of first-enlistment personnel.

DISTRIBUTION OF 1A5X1 FIRST-ENLISTMENT PERSONNEL ACROSS SPECIALTY JOBS (N = 65)

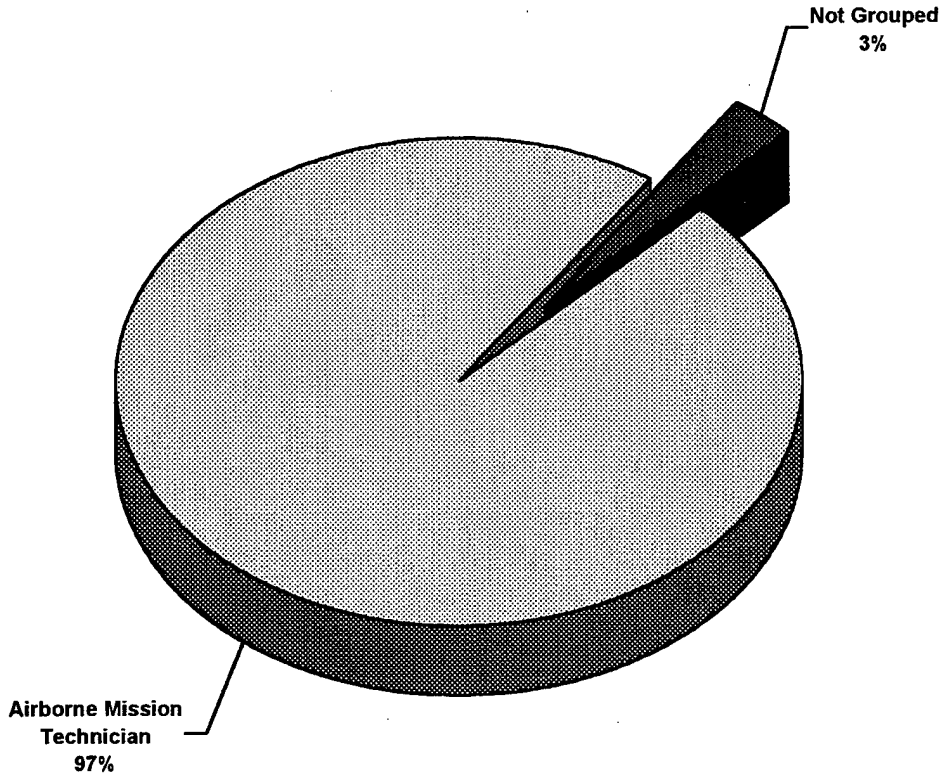

FIGURE 2

TABLE 14

RELATIVE PERCENT TIME SPENT ON DUTIES BY
FIRST-JOB ASSIGNMENT PERSONNEL
(N=13)

DUTIES		PERCENT TIME SPENT
A	PERFORMING GENERAL IN-FLIGHT ACTIVITIES	23
B	MONITORING OR OPERATING ELECTRONIC COMPUTER SYSTEMS	4
C	PERFORMING PREMISSION AND POSTMISSION ACTIVITIES	7
D	PERFORMING PREFLIGHT INSPECTIONS OR PROCEDURES	12
E	MAINTAINING MISSIONS SYSTEMS	20
F	PERFORMING MOBILITY ACTIVITIES	9
G	PERFORMING COMMON AIRCREW ACTIVITIES	16
H	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3
I	PERFORMING TRAINING ACTIVITIES	0
J	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER	4
K	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1

TABLE 15

REPRESENTATIVE TASKS PERFORMED BY AFSC 1A5X1
FIRST-JOB ASSIGNMENT PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=13)
C0058	Participate in general or specialized mission briefings	100
A0012	Interpret visual fault indicators for fault isolations	100
C0060	Review, annotate, or initiate aircraft flight or maintenance record forms, such as Air Force Technical Order (AFTO) Forms 781-series	100
D0080	Perform visual inspections of cables or connector air ducts	100
C0059	Perform pre-mission requirements, such as reviewing flight crew information files (FCIFs) or annotating flight orders	100
D0073	Perform preflight inspections of life support equipment or seats	100
A0005	Decode octal, binary, or hexadecimal readouts	100
A0037	Perform or practice aircrew emergency procedures	100
A0014	Load or unload programs using hard disk subsystems (HDSs)	100
G0187	Review mission operations read files (MORFs)	100
G0186	Review FCIFs	100
G0185	Post changes to personal aircrew publications	100
A0038	Remove or replace minor electrical hardware, such as lamps or switches	100
A0039	Remove, replace, or reinstall non-electrical hardware, such as screws, nuts, or covers	100
E0101	Interpret block diagrams for fault isolations	100
C0055	Debrief ground maintenance personnel	92
E0115	Perform diagnostics on mission equipment	92
C0056	Debrief operations personnel on software or equipment malfunctions	92
E0087	Fault isolate cooling systems	92
D0063	Perform preflight inspections of circuit breaker panels	92
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	92
D0081	Secure personal equipment on aircraft during preflight	92
E0084	Coordinate missions systems equipment malfunctions with MCCs	92
G0188	Review or annotate flight orders	92
G0179	Operate galley equipment, such as ovens or coffee makers	92
G0167	File in-flight logs in aircraft history books	92
E0099	Identify test equipment malfunctions	92
E0100	Inspect card slots	92
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	92
F0143	Perform aircraft cocking or uncocking procedures	92
A0028	Monitor or operate identification friend or foe (IFF) units	85
C0054	Conduct mission planning sessions	85
A0009	Interpret on-line status indicators for fault isolations	85
A0029	Monitor or operate system M	85
D0077	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	85
C0057	Identify and coordinate mission software requirements	85
A0002	Analyze equipment for best mission configurations	85
G0171	Notify flight engineers (FEs) of visual warning display unit malfunctions	85

* Average Number of Tasks Performed -109

TABLE 16

RELATIVE PERCENT TIME SPENT ON DUTIES BY
FIRST-ENLISTMENT PERSONNEL
(N=65)

DUTIES		PERCENT TIME SPENT
A	PERFORMING GENERAL IN-FLIGHT ACTIVITIES	24
B	MONITORING OR OPERATING ELECTRONIC COMPUTER SYSTEMS	5
C	PERFORMING PREMISSION AND POSTMISSION ACTIVITIES	7
D	PERFORMING PREFLIGHT INSPECTIONS OR PROCEDURES	12
E	MAINTAINING MISSIONS SYSTEMS	19
F	PERFORMING MOBILITY ACTIVITIES	9
G	PERFORMING COMMON AIRCREW ACTIVITIES	17
H	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	2
I	PERFORMING TRAINING ACTIVITIES	1
J	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER	2
K	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY AFSC 1A5X1
FIRST-ENLISTMENT PERSONNEL

TASKS		PERCENT MEMBERS PERFORMING (N=65)
C0058	Participate in general or specialized mission briefings	98
C0060	Review, annotate, or initiate aircraft flight or maintenance record forms, such as Air Force Technical Order (AFTO) Forms 781-series	97
C0059	Perform premission requirements, such as reviewing flight crew information files (FCIFs) or annotating flight orders	95
A0037	Perform or practice aircrew emergency procedures	95
C0055	Debrief ground maintenance personnel	95
G0186	Review FCIFs	95
G0187	Review mission operations read files (MORFs)	95
D0063	Perform preflight inspections of circuit breaker panels	94
A0038	Remove or replace minor electrical hardware, such as lamps or switches	94
D0073	Perform preflight inspections of life support equipment or seats	92
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	92
A0002	Analyze equipment for best mission configurations	91
D0080	Perform visual inspections of cables or connector air ducts	91
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	91
E0084	Coordinate missions systems equipment malfunctions with MCCs	91
A0014	Load or unload programs using hard disk subsystems (HDSs)	91
G0185	Post changes to personal aircrew publications	91
F0143	Perform aircraft cocking or uncocking procedures	91
D0081	Secure personal equipment on aircraft during preflight	88
A0001	Advise maintenance personnel in identifying aircraft systems malfunctions	88
G0189	Secure equipment for descents or landings	88
A0009	Interpret on-line status indicators for fault isolations	86
A0012	Interpret visual fault indicators for fault isolations	86
E0115	Perform diagnostics on mission equipment	86
G0179	Operate galley equipment, such as ovens or coffee makers	86
G0167	File in-flight logs in aircraft history books	86
C0056	Debrief operations personnel on software or equipment malfunctions	86
G0188	Review or annotate flight orders	86
D0077	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	85
E0101	Interpret block diagrams for fault isolations	85
E0100	Inspect card slots	83
C0054	Conduct mission planning sessions	82
A0005	Decode octal, binary, or hexadecimal readouts	82
A0027	Monitor or operate cooling systems	80
A0034	Perform HDS or RTMM loading procedures	80
E0087	Fault isolate cooling systems	78
G0180	Participate in life support training seminars	78
A0004	Coordinate systems status with mission crews	77

* Average Number of Tasks Performed -100

TABLE 18

TEST EQUIPMENT USED BY
FIRST-ENLISTMENT AFSC 1A5X1 PERSONNEL

EQUIPMENT	1ST ENL (N=65)
Fast Fourier Transform (FFT) Test Sets	52
Spectrum Analyzers	52
Multimeters, Simpson Model 260	51
High-Speed Line Printers	20
Patch Cables	2
Tektronics Printers	5
None, do not operate specialized equipment	17
Other	11

Training Emphasis (TE) and Task Difficulty (TD) Data

TE and TD data are secondary factors that can assist technical school personnel in deciding which tasks should be emphasized in entry-level training. These ratings, based on the judgments of senior career ladder NCOs working at operational units in the field, are collected to provide training personnel with a rank-ordering of those tasks in the JI considered important for first-enlistment personnel training (see Table 19 for the top-rated tasks), along with a measure of the difficulty of the JI tasks (see high rated tasks presented in Table 20). When combined with data on the percentages of first-enlistment personnel performing tasks, comparisons can then be made to determine if training adjustments are necessary. For example, tasks receiving high ratings on both task factors, accompanied by moderate to high percentages performing, may warrant resident training. Those tasks receiving high task factor ratings, but low percentages performing, may be more appropriately planned for OJT programs within the career ladder. Low task factor ratings may highlight tasks best omitted from training for first-enlistment personnel, but this decision must be weighed against percentages of personnel performing the tasks, command concerns, and criticality of the tasks.

To assist technical school personnel, AFOMS has developed a computer program that incorporates these secondary factors and the percentage of first-enlistment personnel performing each task to produce an Automated Training Indicator (ATI) for each task. These indicators correspond to training decisions listed and defined in the Training Decision Logic Table found in Attachment 2, AETCI 36-2601, and allows course personnel to quickly focus their attention on those tasks which are most likely to qualify for initial resident course consideration.

Table 19 presents tasks with the highest TE ratings for AFSC 1A5X1 first-enlistment airmen, while Table 20 displays those tasks AFSC 1A5X1 raters judged to be most difficult to learn. For example, TE raters (refer to Table 19) reported that tasks such as performing or practicing aircrew emergency procedures require a high degree of training emphasis and, from the data, most airmen in their first job and within their first enlistment are performing these tasks. Table 20 shows TD raters reported isolating fault radar systems to be among the most difficult tasks to learn, and with high TE ratings and high first-job and first-enlistment personnel performing is appropriate to teach in the technical school.

Various lists of tasks, accompanied by TE and TD ratings, and where appropriate, ATI information, are contained in the TRAINING EXTRACT package and should be reviewed in detail by training school personnel. (For a more detailed explanation of TE and TD ratings, see Task Factor Administration in the **SURVEY METHODOLOGY** section of this report.)

TABLE 19

TASKS RATED HIGHEST IN TRAINING EMPHASIS

TASKS		TNG EMP*	PERCENT MEMBERS PERFORMING 1ST JOB (N=13)	PERCENT MEMBERS PERFORMING 1ST ENL (N =65)	TASK DIFF**	ATI
A0037	Perform or practice aircrew emergency procedures	6.58	100	95	5.58	18
A0012	Interpret visual fault indicators for fault isolations	6.37	100	86	6.07	18
E0087	Fault isolate cooling systems	6.29	92	78	6.11	18
A0009	Interpret on-line status indicators for fault isolations	6.26	85	86	6.15	18
E0115	Perform diagnostics on mission equipment	6.26	92	86	6.81	18
A0002	Analyze equipment for best mission configurations	6.08	85	91	6.02	18
A0027	Monitor or operate cooling systems	5.89	77	80	4.95	18
D0063	Perform preflight inspections of circuit breaker panels	5.84	92	94	4.00	13
D0077	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	5.71	85	85	4.20	18
D0073	Perform preflight inspections of life support equipment or seats	5.68	100	92	4.09	18
G0185	Post changes to personal aircrew publications	5.66	100	91	4.95	18
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	5.55	92	91	3.87	13
E0084	Coordinate missions systems equipment malfunctions with MCCs	5.55	92	91	5.07	18
D0080	Perform visual inspections of cables or connector air ducts	5.53	100	91	4.28	18
C0055	Debrief ground maintenance personnel	5.47	92	95	5.02	18
E0097	Fault isolate radar systems	5.47	69	51	8.60	18
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	5.47	92	92	5.42	18
G0170	Maintain current status of flight manuals, safety and operational supplements, or flight crew checklists	5.42	69	75	4.63	18
G0186	Review FCIFs	5.42	100	95	3.50	13
G0178	Operate fire extinguishers	5.39	100	94	3.60	13
G0187	Review mission operations read files (MORFs)	5.37	100	95	3.56	13
A0021	Monitor and operate life support equipment	5.37	69	58	3.56	13

* Mean TE Rating is 2.70, and Standard Deviation is 1.73 (High TE = 4.43)

** Average TD Rating is 5.00

TABLE 20

TASKS RATED HIGHEST IN TASK DIFFICULTY

TASKS		TASK DIFF	PERCENT MEMBERS PERFORMING 1ST JOB (N=13)	1ST ENL (N=65)	3-SKL LVL (N=59)	5-SKL LVL (N=91)	7-SKL LVL (N=51)	TNG EMP	ATI
E0097	Fault isolate radar systems	8.60	69	51	47	59	63	5.47	18
A0024	Monitor and operate radar systems	7.43	62	49	46	56	55	5.32	12
E0101	Interpret block diagrams for fault isolations	7.26	100	85	83	84	88	5.13	18
I0248	Develop training programs, plans, or procedures	7.09	0	2	2	46	67	1.34	2
E0113	Operationally check radar systems	7.05	62	48	44	53	57	4.89	12
I0247	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	7.00	0	0	0	37	39	1.53	****
A0032	Perform flight tests for new equipment validation	6.93	38	28	25	42	67	2.61	2
E0095	Fault isolate IFF units	6.89	69	62	61	59	61	5.34	18
I0249	Develop written tests	6.86	0	0	0	32	63	1.05	****
E0115	Perform diagnostics on mission equipment	6.81	92	86	86	85	94	6.26	18
E0119	Perform transmitter ground radiations	6.81	8	9	10	7	25	1.47	2
I0250	Develop or procure training materials or aids	6.78	8	2	2	47	61	1.58	2
I0252	Evaluate effectiveness of training programs, plans, or procedures	6.75	0	0	0	38	67	.97	****
A0033	Perform flight tests for new flight procedures	6.73	23	14	14	32	57	2.32	2
A0025	Monitor and operate software enhancement tools	6.66	15	14	12	22	27	2.61	2
H0235	Write recommendations for awards or decorations	6.61	0	2	2	33	73	2.18	2
D0078	Perform preflight inspections of radar systems	6.60	62	49	46	55	57	4.68	12
A0036	Perform operational tests of program software	6.59	54	40	39	55	69	2.63	14
I0243	Conduct formal course classroom training	6.53	0	9	10	34	43	1.87	2
E0099	Identify test equipment malfunctions	6.51	92	77	80	62	65	4.74	18
I0254	Evaluate training methods or techniques of instructors	6.50	0	0	0	34	73	.95	****
H0239	Write or indorse military performance reports	6.49	0	0	0	33	67	2.21	****
H0214	Establish organizational policies, such as operating instructions (OIs) or standard operating procedures(SOPs)	6.48	0	3	2	16	49	.21	2
E0090	Fault isolate DPSs	6.40	38	48	51	42	47	4.21	15
E0089	Fault isolate DDSs	6.39	38	48	51	42	47	4.24	15

* Mean TE Rating is 2.70, and Standard Deviation is 1.73 (High TE = 4.43)

** Average TD Rating is 5.00

Specialty Training Standard (STS)

A comprehensive review of STS 1A5X1, dated July 1999, compared STS items to survey data (based on the previously mentioned assistance from subject-matter experts in matching JI tasks to STS elements). STS elements containing general knowledge information, mandatory entries, subject-matter-knowledge-only requirements, or basic supervisory responsibilities were not examined. Task knowledge and performance elements of the STS were compared against the standard set forth in AETCI 36-2601 and AFI 36-2623 (i.e., include tasks performed or knowledge required by 20 percent or more of the personnel in a skill level [criterion group] of the AFS).

The 1A5X1 STS is divided into mission specific sections with many systems listed in more than one section. Most of the task titles in the STS are based on subject knowledge levels only which makes it difficult to determine what should be task knowledge. Table 21 is a sample of some of these elements performed by a large percentage of the members.

Tasks not referenced to any element of the STS are listed at the end of the STS computer listing of the Training Extract. These tasks were reviewed to determine if there were any tasks concentrated around any particular function or job. There were no significant technical tasks that were not matched to an STS element.

TABLE 21

EXAMPLES OF TECHNICAL TASKS PERFORMED BY AFSC 1A5X1 GROUP MEMBERS
SUGGESTED FOR PROFICIENCY CODE REVIEW TO PERFORMANCE CODING
(PERCENT MEMBERS PERFORMING)

TASKS		TNG EMP	PERCENT MEMBERS PERFORMING 3-SKL LVL (N=59)	5-SKL LVL (N=91)	7-SKL LVL (N=51)	TASK DIFF	ATI
13.4	**Mission Cooling Systems**						
A0027	Monitor or operate cooling systems	5.89	80	81	96	4.95	18
A0040	Reseat, reconnect, or configure inter- or intra-unit wiring cables	3.92	75	66	76	4.41	17
E0087	Fault isolate cooling systems	6.29	78	87	94	6.11	18
18.2.9	**Programmable Signal processor**						
A0041	Reseat, remove, or replace LRUs or secondary replaceable units	5.47	92	88	90	5.42	18
19.1.2	**Maintenance Computer Program**						
E0095	Fault isolate IFF units	5.34	61	59	61	6.89	18
A0014	Load or unload programs using hard disk subsystems	5.16	86	74	78	4.34	18
E0097	Fault isolate radar systems	5.47	47	59	63	8.60	18

* Mean TE Rating is 2.70, and Standard Deviation is 1.73 (High TE = 4.43)
** Average TD Rating is 5.00

JOB SATISFACTION ANALYSIS

An examination of the job satisfaction indicators of various groups can give career ladder managers a better understanding of some of the factors which may affect the job performance of airmen in the career ladder. Attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions were included in the survey booklet to provide indications of job satisfaction.

Table 22 presents job satisfaction data for AFSC 1A5X1 TAFMS groups, together with TAFMS data for a comparative sample of Airborne Operation career ladders surveyed in 1998. First-enlistment personnel rated perception of job interest and utilization of training lower than the comparative sample but rated sense of accomplishment higher. Reenlistment intentions were the same as the comparative sample. Second-enlistment personnel rated utilization of training lower than the comparative sample, including reenlistment intentions. Career airmen (those over 8 years TAFMS), rated job interest, utilization of training and reenlistment intentions lower than the comparative sample with the exception of sense of accomplishment gained from work, which they rated slightly higher. All TAFMS groups' rate perceived utilization of training much lower than the comparative sample.

Table 23 compares data from the previous OSR completed in 1995. Expressed job interest was rated higher for second-enlistment but lower for first- and career- enlistment. Reenlistment intentions were rated lower overall for the 1995 study compared to the 1995 study.

In Table 24, a review of the job satisfaction ratings for the specialty jobs identified in this survey reveals satisfactory ratings for all areas among the Airborne Mission Systems members. It is interesting to note that sense of accomplishment gained from work had the lowest rating for the two jobs.

TABLE 22

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS (PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1999 1A5X1 (N=65)	COMP SAMPLE* (N=1,144)	1999 1A5X1 (N=56)	COMP SAMPLE* (N=835)	1999 1A5X1 (N=86)	COMP SAMPLE* (N=3,647)
EXPRESSED JOB INTEREST:						
INTERESTING	66	72	77	73	71	78
SO-SO	26	14	14	16	16	13
DULL	8	14	9	11	13	9
PERCEIVED UTILIZATION OF TRAINING:						
EXCELLENT TO PERFECT	17	28	14	25	16	23
FAIRLY TO FAIRLY WELL	75	60	84	62	73	63
NONE TO VERY LITTLE	8	12	2	13	10	14
SENSE OF ACCOMPLISHMENT GAINED FROM WORK:						
SATISFIED	71	68	77	64	72	69
NEUTRAL	8	14	14	13	9	10
DISSATISFIED	22	18	9	23	19	21
REENLISTMENT INTENTIONS:						
YES, OR PROBABLY YES	45	45	43	50	57	60
NO, OR PROBABLY NO	55	55	57	50	13	16
PLAN TO RETIRE	0	0	0	0	30	24

Comparative sample of Airborne Mission Systems career ladders surveyed in 1998 includes Operation MAJCOMs such as Command Control Systems Operations, Intelligence, Safety, Aircrew Protection and Weather.

TABLE 23

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS (PERCENT MEMBERS RESPONDING)

	1-48 MOS TAFMS		49-96 MOS TAFMS		97+ MOS TAFMS	
	1999 1A5X1 (N=65)	1995 1A5X1 (N=45)	1999 1A5X1 (N=56)	1995 1A5X1 (N=23)	1999 1A5X1 (N=86)	1995 1A5X1 (N=50)
EXPRESSED JOB INTEREST:						
INTERESTING	66	69	77	70	71	78
SO-SO	26	18	14	17	16	10
DULL	8	13	9	13	13	12
PERCEIVED UTILIZATION OF TRAINING:						
EXCELLENT TO PERFECT	17	**	14	**	16	**
FAIRLY TO FAIRLY WELL	75	98	84	96	73	98
NONE TO VERY LITTLE	8	2	2	4	10	2
SENSE OF ACCOMPLISHMENT GAINED FROM WORK:						
SATISFIED	71	71	77	74	72	70
NEUTRAL	8	18	14	9	9	8
DISSATISFIED	22	11	9	17	19	22
REENLISTMENT INTENTIONS:						
YES, OR PROBABLY YES	45	58	43	91	57	74
NO, OR PROBABLY NO	55	42	57	9	13	12
PLAN TO RETIRE	0	0	0	0	30	14

** Question not surveyed

TABLE 24

COMPARISON OF JOB SATISFACTION INDICATORS BY SPECIALTY JOBS
(PERCENT MEMBERS RESPONDING)

	Airborne Mission Technician Job (ST010) (N=192)	Airborne Mission Instructor Job (ST07) (N=10)
EXPRESSED JOB INTEREST:		
INTERESTING	71	60
SO-SO	18	30
DULL	10	10
PERCEIVED UTILIZATION OF TRAINING:		
EXCELLENT TO PERFECT	16	20
FAIRLY TO FAIRLY WELL	77	70
NONE TO VERY LITTLE	7	10
SENSE OF ACCOMPLISHMENT GAINED FROM WORK:		
SATISFIED	73	70
NEUTRAL	10	0
DISSATISFIED	17	30
REENLISTMENT INTENTIONS:		
YES, OR PROBABLY YES	49	40
NO, OR PROBABLY NO	39	30
WILL RETIRE	11	30

IMPLICATIONS

This survey was initiated to provide current job and task data for use in evaluating the AFMAN 36-2108 *Specialty Description* and appropriate training documents.

Survey results clearly indicate that the present classification structure, as described in the latest specialty description, accurately portrays the jobs performed in this career ladder. Based on survey data, the career ladder training documents require review to ensure appropriate proficiency coding. The career ladder progression is typical, with the move from technical work at the 3- and 5-skill levels to supervisory and management tasks at the 7-skill level. Job satisfaction is slightly lower for second-enlistment and career members than the comparative sample of like operational AFSCs. First-enlistment and career TAFMS groups rate perceived utilization of training lower than the comparative sample, reinforcing the recommendation for a review of the STS.

APPENDIX A

SELECTED REPRESENTATIVE TASKS PERFORMED BY SPECIALTY JOB GROUPS

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TABLE A1

AIRBORNE MISSION TECHNICIAN JOB (ST10)

REPRESENTATIVE TASKS		PERCENT MEMBERS PERFORMING
A0037	Perform or practice aircrew emergency procedures	99
C0055	Debrief ground maintenance personnel	99
C0058	Participate in general or specialized mission briefings	98
G0186	Review FCIFs	98
C0059	Perform pre-mission requirements, such as reviewing flight crew information files (FCIFs) or annotating flight orders	97
C0060	Review, annotate, or initiate aircraft flight or maintenance record forms, such as Air Force Technical Order (AFTO) Forms 781-series	97
E0084	Coordinate missions systems equipment malfunctions with MCCs	96
A0002	Analyze equipment for best mission configurations	95
D0063	Perform preflight inspections of circuit breaker panels	95
D0073	Perform preflight inspections of life support equipment or seats	95
G0185	Post changes to personal aircrew publications	95
D0080	Perform visual inspections of cables or connector air ducts	94
D0072	Perform preflight inspections of in-flight spares, technical orders (TOs), or templates	94
G0187	Review mission operations read files (MORFs)	94
G0188	Review or annotate flight orders	94
G0189	Secure equipment for descents or landings	94
A0041	Reseat, remove, or replace line replaceable units (LRUs) or secondary replaceable units (SRUs)	94
G0178	Operate fire extinguishers	94
D0081	Secure personal equipment on aircraft during preflight	93
A0038	Remove or replace minor electrical hardware, such as lamps or switches	93
F0143	Perform aircraft cocking or uncocking procedures	93
G0179	Operate galley equipment, such as ovens or coffee makers	92
C0056	Debrief operations personnel on software or equipment malfunctions	92
A0001	Advise maintenance personnel in identifying aircraft systems malfunctions	92
E0115	Perform diagnostics on mission equipment	91
E0087	Fault isolate cooling systems	91
D0077	Perform preflight inspections of oxygen systems, special ADS panels, or CMTs	90
A0027	Monitor or operate cooling systems	89
G0170	Maintain current status of flight manuals, safety and operational supplements, or flight crew checklists	89
G0167	File in-flight logs in aircraft history books	89
E0101	Interpret block diagrams for fault isolations	89
C0054	Conduct mission planning sessions	88
A0012	Interpret visual fault indicators for fault isolations	88
A0004	Coordinate systems status with mission crews	88
G0180	Participate in life support training seminars	88
A0009	Interpret on-line status indicators for fault isolations	85
G0171	Notify flight engineers (FEs) of visual warning display unit malfunctions	84

TABLE A2

AIRBORNE MISSION INSTRUCTOR JOB (ST07)

REPRESENTATIVE TASKS		PERCENT MEMBERS PERFORMING
H0225	Inspect personnel for compliance with military standards	100
H0226	Interpret policies, directives, or procedures for subordinates	100
H0202	Counsel subordinates concerning personal matters	100
I0252	Evaluate effectiveness of training programs, plans, or procedures	90
I0248	Develop training programs, plans, or procedures	90
H0220	Evaluate personnel for compliance with performance standards	90
I0241	Brief personnel concerning training programs or matters	90
I0249	Develop written tests	90
I0250	Develop or procure training materials or aids	90
I0247	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	80
I0253	Evaluate progress of trainees	80
I0246	Determine training requirements	80
H0215	Establish performance standards for subordinates	80
H0209	Develop or establish work methods or procedures	80
I0245	Counsel trainees on training progress	70
I0257	Personalize lesson plans	70
I0256	Maintain training records or files	70
H0239	Write or indorse military performance reports	70
H0204	Determine or establish work assignments or priorities	70
I0251	Establish or maintain study reference files	70
H0201	Conduct supervisory performance feedback sessions	70
H0223	Initiate actions required due to substandard performance of personnel	70
I0243	Conduct formal course classroom training	60
I0242	Complete student entry or withdrawal forms	60
J0260	Compile data for records, reports, logs, or trend analyses	60
I0255	Inspect training materials or aids for operation or suitability	60
H0235	Write recommendations for awards or decorations	60
J0270	Maintain administrative files	60
H0230	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	60
I0240	Administer or score tests	50
J0278	Review TO changes	50
G0170	Maintain current status of flight manuals, safety and operational supplements, or flight crew checklists	50
J0272	Maintain TO libraries	30
J0271	Maintain publications libraries, other than TO libraries	30